

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1 - 10. (Canceled)

1 11. (Currently Amended) A communications system for providing bi-
2 directional data communications on a backplane wherein the backplane includes a
3 communications channel, the system comprising:

4 a first transmitter module, coupled to the communications channel, to
5 encode a first user data stream into a first coded data stream and transmit the first
6 coded data stream through the communications channel, the first transmitter
7 module includes equalization circuitry having at least one tap wherein the tap
8 includes an adjustable coefficient;

9 a first receiver module, coupled to the communications channel, to receive
10 the first coded data stream and to decode the first coded data stream into the first
11 user data stream, wherein the first receiver module determines information which
12 is representative of the adjustable coefficient of the tap;

13 a back channel, coupled to the first transmitter module and the first
14 receiver module, to provide back channel data from the first receiver module to
15 the first transmitter module wherein the back channel data includes information
16 representative of the adjustable coefficient; and

17 an adjustment mechanism in the first transmitter module, wherein while
18 the first coded data stream is being transmitted from the first transmitter module

19 to the first receiver module the adjustment mechanism is configured to
20 dynamically
21 determine an adjustment coefficient for the adjustable tap based on
22 information from the back channel and
23 apply the adjustment coefficient to adjust the tap.

1 12. (Previously Presented) The communications system of claim 11
2 wherein the back channel is external from the communications channel.

1 13. (Previously Presented) The communications system of claim 11
2 wherein the back channel is a shelf software loop.

1 14. (Previously Presented) The communications system of claim 13
2 wherein the shelf software loop interrogates the first transmitter module and the
3 first receiver module before providing information representative of the adjustable
4 coefficient.

1 15. (Previously Presented) The communications system of claim 11
2 wherein the back channel is physically separate from the communications
3 channel.

1 16. (Previously Presented) The communications system of claim 15
2 wherein the back channel includes a software link that coordinates
3 communications of information representative of the adjustable coefficient
4 between the first receiver module and the first transmitter module.

1 17. (Previously Presented) The communications system of claim 11
2 wherein the back channel is incorporated into the bi-directional data
3 communications on the backplane.

1 18. (Previously Presented) The communications system of claim 17
2 further including:
3 a second transmitter module, coupled to the communications channel,
4 wherein the second transmitter module encodes a second user data stream and the
5 back channel data into the second coded data stream and transmits the second
6 coded data stream through the communications channel; and
7 a second receiver module, coupled to the first transmitter module, to
8 receive the second coded data stream and decode the second coded data stream
9 into the second user data stream and the back channel data.

1 19. (Currently Amended) A communications system for providing bi-
2 directional data communications on a backplane wherein the backplane includes a
3 communications channel, the system comprising:
4 a first transmitter module, coupled to the communications channel, to
5 encode a first user data stream into a first coded data stream and transmit the first
6 coded data stream through the communications channel, the first transmitter
7 module includes an adaptive transmit equalizer;
8 a first receiver module, coupled to the communications channel, to receive
9 the first coded data stream and to decode the first coded data stream into the user
10 data stream, wherein the first receiver module determines information which is
11 representative of at least one operating parameter of the adaptive transmit
12 equalizer;
13 a second transmitter module, coupled to a back channel, to transmit the
14 information which is representative of the at least one operating parameter of the

15 adaptive transmit equalizer to the first transmitter module via the back channel;
16 and
17 an adjustment mechanism in the first transmitter module, wherein while
18 the first coded data stream is being transmitted from the first transmitter module
19 to the first receiver module, the adjustment mechanism is configured to
20 dynamically
21 determine an adjustment coefficient for the adjustable tap based on
22 information from the back channel and
23 apply the adjustment coefficient to adjust the adjustable tap.

1 20. (Previously Presented) The communications system of claim 19
2 wherein the back channel is external from the communications channel.

1 21. (Previously Presented) The communications system of claim 19
2 wherein the back channel is a shelf software loop.

1 22. (Previously Presented) The communications system of claim 21
2 wherein the shelf software loop interrogates the first transmitter module and the
3 first receiver module before providing information representative of the adjustable
4 coefficient.

1 23. (Previously Presented) The communications system of claim 19
2 wherein the back channel is physically separate from the communications
3 channel.

1 24. (Previously Presented) The communications system of claim 23
2 wherein the back channel includes a software link that coordinates

3 communications of information representative of the adjustable coefficient
4 between the first receiver module and the first transmitter module.

1 25. (Previously Presented) The communications system of claim 19
2 wherein the back channel is incorporated into the bi-directional data
3 communications on the backplane and wherein the system further includes a
4 second receiver module, coupled to the first transmitter module, to receive a
5 second coded data stream, from the second transmitter module, and to decode the
6 second coded data stream into second user data stream and the information which
7 is representative of the at least one operating parameter of the adaptive transmit
8 equalizer to the first transmitter module via the back channel.